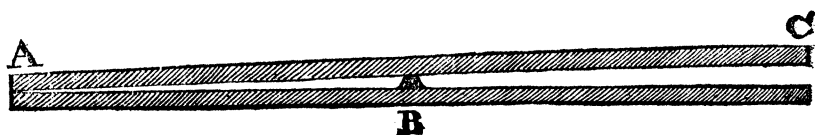


III. *An Account of an Experiment touching the Direction of a Drop of Oil of Oranges, between two Glass Planes, towards any side of them that is nearest press'd together. By Mr. Fr. Hauksbee, F.R.S.*

THE Glass Planes which I used were about 6 Inches square; and being very clean, a drop or two of Oil of Oranges was let fall on the lower Plane, suppose at B; then the upper Plane was laid on it, so near as to touch the Liquid, that it might become Contiguous



to both their Surfaces. Thus the Planes being made to touch one another at the side A, and opened at the side C, as in the Scheme above, the lower Plane lying parallel with the Horizon, the drop of Oil would immediately move towards the touching side of the Planes; and when it was arrived there, it was but reversing the Angle, and the Drop would return from A to C; and after the same Manner it might be directed to any side or part of the same. Moreover, if the Planes were elevated 8 or 10 Degrees at A, yet would the Drop ascend towards the side A, tho' not so swift as when the Planes were in the fore-mentioned Position. It was farther to be observed, that the nearer the Drop approach'd the touching side, so would the Velocity of its Motion be encreased: The reason of which seems very

very plain, allowing the Ascent of Water in small Tubes, and between the Surfaces of nearly contiguous Planes, to be explain'd from the Power of Attraction, that one Surface has to another at such a nearness (as I see no Reason to doubt it :) For the Drop of Oil moving on towards the contiguous Surfaces, comes to enlarge its space, and touches the Planes in more and more Parts, as it approaches nearer and nearer the touching side. Thus in the whole Progress of its Motion, it is continually encreasing in its Surface, and consequently the Power of Attraction must encrease in proportion to that Surface ; so that the Celerity of its Motion must necessarily be augmented. This Experiment seems very powerfully to confirm the Experiments made before on the same Subject, from the gradual Increase of the Motion of the Drop ; representing thereby the several Appearances of the Ascent of Water in different siz'd Tubes, or between Planes whose Surfaces are placed at different distances, the slower Motion representing those Experiments made in larger, and the swifter in smaller Tubes ; the same to be observed in different distanc'd Planes.

I have since repeated the same Experiment *in vacuo*, where, in all Respects, it answered as in the open Air ; which is a plain Indication, that the Presence of the Air has nothing at all to do in producing this *Phenomenon*.

E R R A T A :

IN Phil. Transact. Numb. 331. in the Contents pag. 309. l. 19. and pag. 324. l. 2. for St. Margaret's read St. Maries.

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